

BPA Press Release

Portland, Ore. – Small Towns and communities across the state of Washington will have access to the information superhighway thanks to an agreement announced today. The Bonneville Power Administration and the Washington Public Utility Districts Association signed an agreement to make fiber optic cables available to public and private entities and the communities they serve.

Greg Marney, director of telecommunications for WPUDA, said the network is expected to be running by early 2000 with interconnection points in every county where BPA fiber now runs, within two years. The network will provide access to telecommunication transport between the entities while individual members will operate the network within their own services areas.

"This agreement will bring the information superhighway to rural areas," said Jack Robertson, former BPA deputy administrator. "We are offering special access to anyone who will provide services to those areas at a reasonable cost. Washington PUD Association is the first in Washington to step up to provide this service."

"These lines will enhance utility operations, but we're also pleased to be working with Bonneville to open up available lines to our communities," said Don Godard, manager of Grant County PUD and chairperson of a committee overseeing development of the public telecommunications network. "Many PUDs and other utilities serve communities that currently do not have high speed telecommunication facilities."

WPUDA represents the 28 PUDs that provide electricity and water service in Washington. The association is organizing a nonprofit corporation to set up and operate the network. Sixteen PUDs will belong to the organization initially. Other utilities and other entities may join in the future.

The utilities will use the network for utility purposes and plan to make excess capacity available to other organizations, including schools, hospitals, emergency services, museums, libraries, businesses that contribute to rural economic development, and federal, state, local and tribal governments. The utilities intend to provide open access to the network at nondiscriminatory, nonprofit, cost-based rates.

Rural communities are not economically attractive to most local and long haul telecommunications companies because of the low population densities and remoteness of connections. Rates can be four times higher than that for urban areas. But end user costs for rural and remote areas served by the agreement will be roughly comparable to those paid by end users in larger communities in the Northwest. BPA's rates for the public benefits fiber program fully recover BPA's costs to install and operate.

BPA Press Release

Spokane, Wash. - More than 100 mayors and community leaders from the Northwest will gather in Spokane on Sept. 22 and 23 at the Spokane Center to discuss how they can bring the information superhighway to their rural areas.

The media are invited to attend the "Communication is at Hand" conference. The event is co-sponsored by the Bonneville Power Administration and the Washington PUD Association. It will begin at 9 a.m. on Wednesday and 8:30 a.m. on Thursday.

Fiber optics - with its bounty of the Internet, high-speed computers and e-commerce - is becoming a fact of life for cities where it is replacing telephone wires and co-axial cable as the main source of data and information. That's not so for rural areas where the low number of users per mile makes the cost of installing fiber optics cable too expensive.

"The information superhighway has become as critical to the economic health of towns across the Northwest as electricity was 60 years ago," says Jack Robertson, BPA deputy administrator. "Deregulation of the telecommunication industry and population shifts are changing the rules. Businesses concerned about the quality of life for employees, as well as low overhead and labor rates, look to rural areas when siting new facilities. But they won't go there if they don't have a link to the world of information."

Speakers include State Senator Lisa Brown of Washington, Montana Public Utility Commissioner Bob Rowe, General Manager William Ray from the Glasgow, Ky., Energy Plant Board, Dr. William Melody of the Delft University of Technology in the Netherlands, Dr. Edwin Parker, technology expert and author and Executive Director Steve Johnson of the Washington PUD Association. Other speakers include utility and telecommunications managers from Oregon, Washington, Idaho and Montana and across the U.S.

Supporting sponsors are Alcoa Fujikura, Ltd., Nortel Networks, and Lucent Technologies. Connect directly to the conference Web site at <http://www.bpa.gov/Corporate/KC/fiber/conference.htm>

BPA Press Release

PORTLAND, Ore. – A first-ever agreement will put the information superhighway within reach for a group of coastal communities. Mayors and representatives from Reedsport and Newport, Ore., Coos, Lane and Lincoln counties and from several Oregon economic development groups will attend a signing ceremony:

Wednesday, June 9, 1999, 10 a.m.

Lane Substation, 28190 K.R. Nielson Road, Eugene OR

They hope the agreement will help diversify the economy and upgrade communications for schools, hospitals, libraries and other public services in their coastal communities. The upgrade should offset jobs lost to downturns in the fishing and timber industries.






Jack Robertson, deputy administrator for the Bonneville Power Administration, and Randall Kowalke, chairman of the Economic Development Alliance of Lincoln County, will sign the agreement.

Fiber optics – with its bounty of the Internet, high-speed computers and e-commerce – is becoming a fact of life for Oregon cities where it is replacing telephone wires and co-axial cable as the main source of data and information. But that's not so for rural areas where the low number of users per mile makes the cost of installing fiber optics cable too expensive. The agreement is the first step to put rural areas on par with urban areas.

Lane Substation is the hub for a fiber optics route that will run from the suburbs of Eugene to Florence, Ore., and down to near Coos Bay. Workers will install fiber optic cable on an existing BPA transmission line. BPA will use the cable to operate part of the Northwest's transmission grid. The agreement sets aside some of the fibers for communities along the route.

To reach Lane Substation, take I-5 south to Belt Line Road. At the intersection of Belt Line and W. 11th Street (Highway 126) turn right (west). Go 1.5 miles and angle left onto K.R. Nielson Road. Travel 0.5 miles west to the substation.

BPA FIBER OPTIC and TRANSMISSION ROUTES

-  Underway or Completed Fiber Optics Route
-  Proposed Fiber Route
-  BPA Transmission Line
-  BPA Service Area Boundary
-  BPA Substation



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KILOMETERS

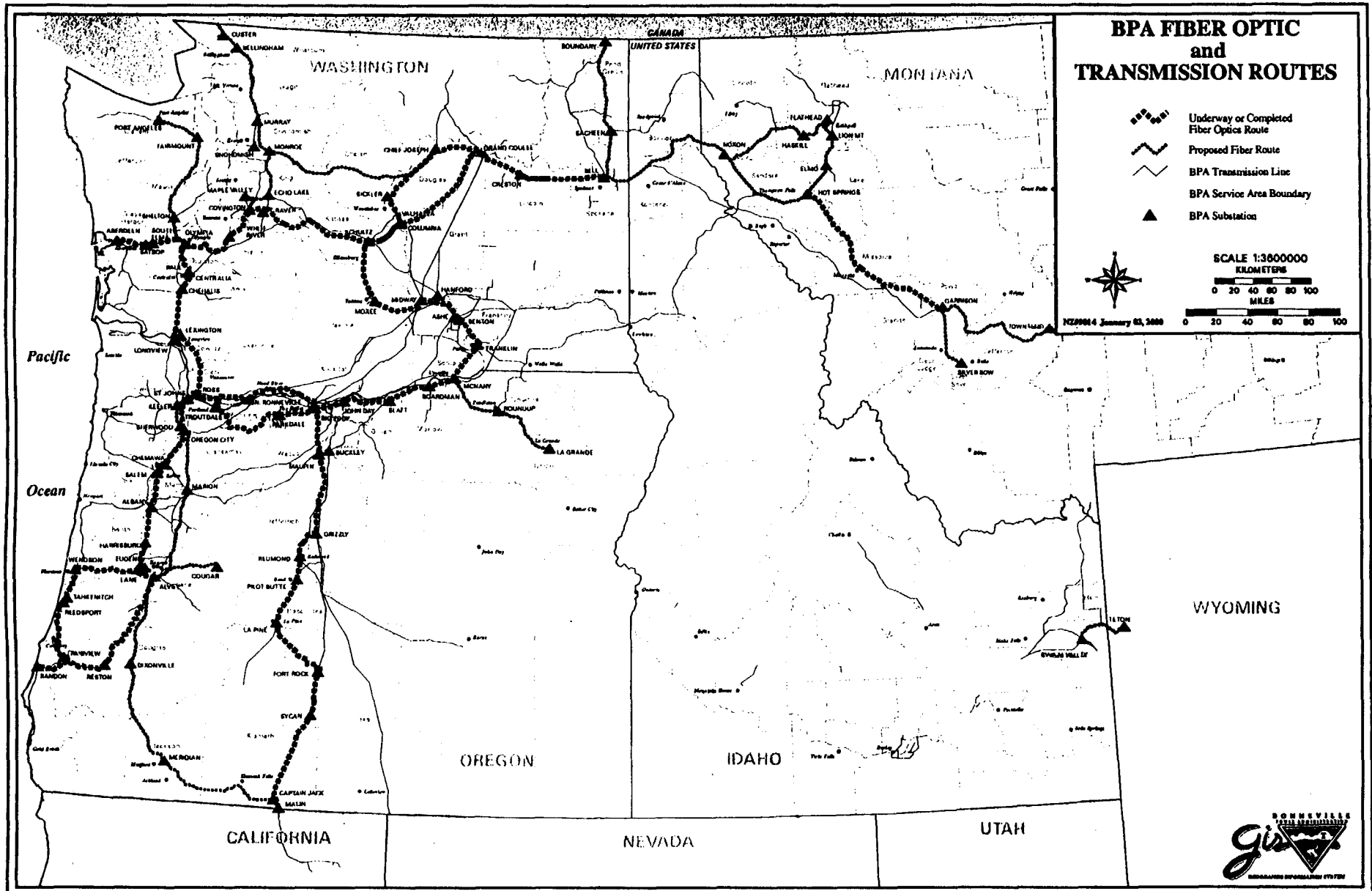
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NZ99014 January 01, 2000

WYOMING



John P. Andrist - CEO and President, North Cascades Broadcasting, Inc., NCI Data.com, Inc.

Mr. Andrist is CEO and President of North Cascades Broadcasting, Inc., which owns and operates two commercial FM Stations and one commercial AM station in the community of Omak, Washington. Also, he is CEO and President of NCI Data.com, Inc., a competitive local exchange carrier company serving all of Okanogan County with broadband data services. Both companies are wholly owned by John and his wife Becki Andrist.

John grew up in Omak and has owned and operated North Cascades Broadcasting since 1989. NCI Data.com was incorporated in 1999. John serves on several community boards and is Chairman of Partnership 2005 which is a County sanctioned organization working on economic diversification. John's media and communications background spans over 25 years mostly in rural Okanogan County.

NCI Data.com, Inc.

We provide reliable, cost-effective dial-up access to the Internet for local individuals and businesses in the Omak and Okanogan area. In addition, we provide e-mail services and web hosting on our local server.

ConnectOkanogan

The purpose of ConnectOkanogan is to facilitate Internet-based economic development in the Okanogan Region of North Central Washington State. The region stretches from the crest of the North Cascades Mountains on the west to the Kettle River Range of the Rocky Mountains on the east and from the Canadian Border on the north to the Big Bend of the Columbia River on the south. This area is fortunate in having both high quality of life and virtually unlimited communications bandwidth availability. Dedicated wireless connections to the Internet up to T-3 or 11mb capacity are available in most areas of the County at very competitive prices. There is a growing group of small to medium-sized Internet-based businesses in the area and facilities to accommodate many more.

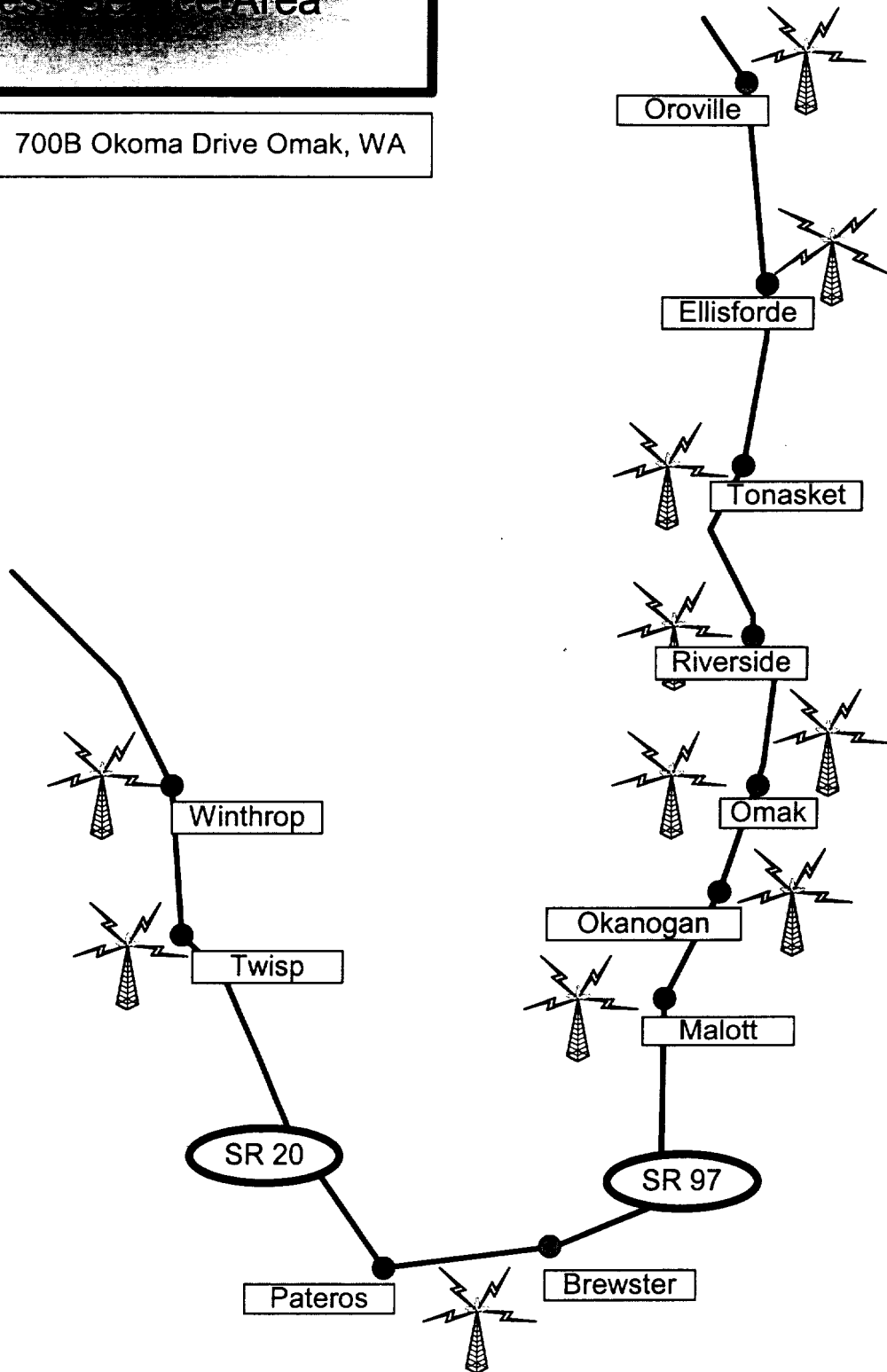
Our communities are small and friendly with diverse populations, clean air and water, inexpensive real estate and abundant recreation. The population density is very low but unlike some of the barren and waterless regions of the west we have two major mountain ranges, numerous rivers including the Columbia and Okanogan, large forests and rolling highlands. Our economy has traditionally been based on timber, cattle and farming. The Okanogan Valley is one of the largest apple-growing areas in the world. The area also has a large number of artists and craftspeople producing an amazing range of fine products.

Bear Creek Lumber

Bear Creek Lumber is a family owned and operated lumber products distributor located in Okanogan County in North Central Washington State, the heart of the Pacific Northwest timber region. BCL has been in operation since 1977, providing top quality products to builders throughout North America and the Pacific Basin. Only in the past three years have we been on the Web. We specialize in the hard-to-find species, such as Western Red Cedar and Alaskan Yellow Cedar. In addition, we also carry an extensive selection of Redwood, Douglas Fir, Ponderosa Pine/Spruce, and also Appalachian Hardwoods. Bear Creek has one of the largest selections of patterns and grades available at one location, with over one million board feet of inventory kept in stock throughout the year. We can ship to any location, including remote offshore destinations, such as Guam or the Virgin Islands.

NOVUScom
COMMUNICATIONS
Wireless Service Area

509 826-0300 700B Okoma Drive Omak, WA





Presentation to Federal/State Joint Conference on Advanced Services

William R. Kopp
Chief Technical Officer (CTO)
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Presentation Objectives

- Inform Attendees of NoaNet Vision
- Provide Overview of NoaNet Infrastructure/Connectivity
- Summarize Internet Connectivity Challenges for Rural Northwest
- Summarize Local Loop Challenges
- Q&A
- Closing



The NoaNet Vision

- Enable Advanced Energy Management Services to Northwest Utilities (Rural)
- Serve Rural Northwest Communities Affordable "Cost Based" Access to Advanced Telecommunications Transport
- Provide "Open Access" Transport
- Bridge the Digital Divide
- Enable Rural Economic Development



NoaNet Infrastructure in Washington State

- Four "Public Purpose" BPA Fibers
 - Ingress/Egress in Rural Counties
 - (Less than 100 Pop Per Sq. Mile)
- Twenty + Telecommunication Shelters
 - NoaNet POP
 - Co-Locate Space for Interconnect
- Technologies
 - SONET for Reliability
 - Primarily IP Transport (Layer 3)
 - TDM Connectivity for "Legacy Systems"



Internet Connectivity

- Internet Interconnection at Network Access Points (NAP's) Seattle
- Major Carriers (Qwest, L3, AT&T) Bypass Rural Areas, No Ingress/Egress
- Lack of Any or Affordable Transport to NAP's from Rural Counties/Communities
- Un-Fulfilled Requests for Internet Transport
- Inhibits Delivery of Advanced Services to Rural Communities



Rural Local Loop Challenges

- Existing Infrastructure
 - Multi-State ILEC
 - Regional ILEC
 - Private Rural ILEC
 - Public ILEC
 - CATV
 - Wireless
- Which Technology?
- Which Business Approach to Infrastructure
"Open Access, Monopolistic"?



Rural Local Loop Challenges

- Infrastructure
 - Rural Local Loop Investment by Multi-State ILEC Not Probable/Not Profitable?
 - ROI of 36 Months?
 - Overbuild Activities by Regional/Rural Providers (Independent/REA/Co-Op)
 - ROI Longer but Encouraging Competition?
 - Overbuild Activities by Competitive Providers (CATV, ISP's, CLEC)
 - ROI of 36 Months?



Rural Local Loop Challenges

- Overbuild Activities by Entities Committed to "Open Access"
 - ROI 15/20 Years?
- Economies of Scale, Build it Once..... Everyone Shares Single Infrastructure
 - Enables Competition
 - Reduced Capital Requirements to Compete in Local Loop



The Future

- Streaming Multimedia
 - The Next Killer App
- Zero-Cost Infrastructure
- Content/Applications Providers Pay for Transport on Transaction Basis?
- Create a Rural Society of Digital "Haves" vs. Have-Not's"
- Enable the Digital Economy in Rural NW

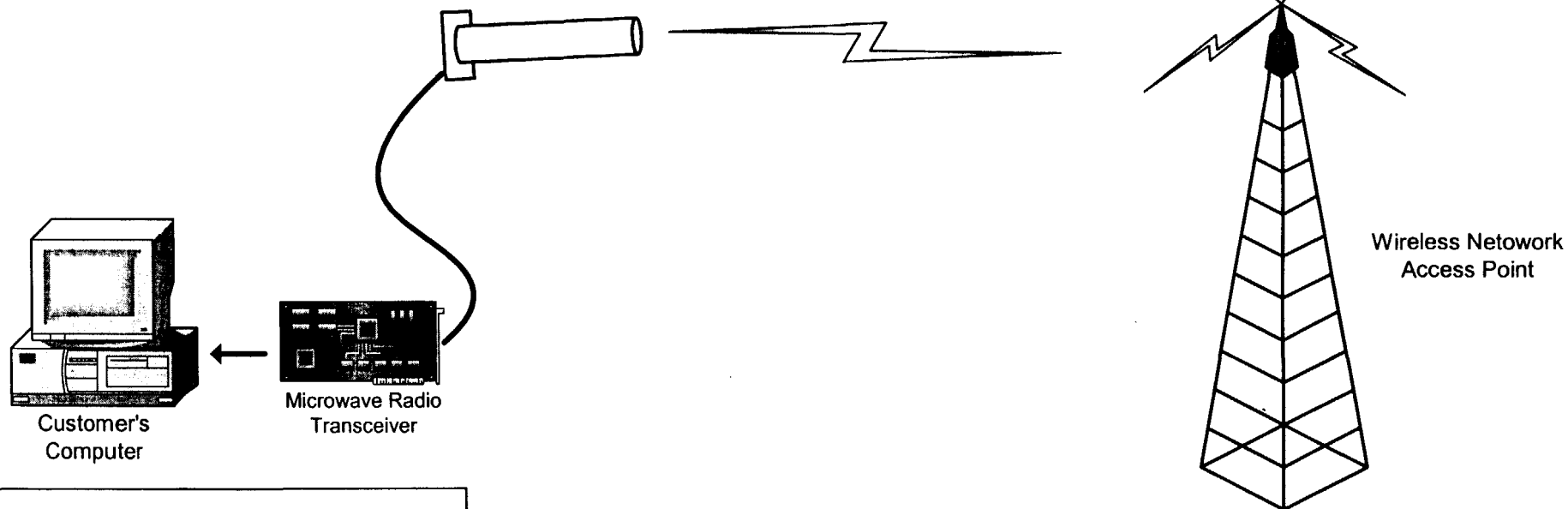


Q&A



The Basic Wireless System for Small and Medium

NCI Data.com, Omak 509 826-0300



A Microwave Transceiver card is installed in the customer's computer at home or office. Also installed is an outside antenna

Customer's Computer or Network sends and receives data via an NCI Data.com Access Point at Speeds 64kbps to 2mbps Plans are underdevelopment for 30 to 100mbps

**FEDERAL/STATE JOINT CONFERENCE on ADVANCED SERVICE
WESTERN REGIONAL FIELD TRIPS and HEARINGS
APRIL 14 - 17, 2000**

Day One: April 14, 2000, Tacoma, Washington

Location: Tacoma Public Utilities Auditorium, 3628 South 35th Street,
Tacoma, WA

Directions: From I-5 take Highway 16 West to Bremerton. Take Union Avenue
Exit. Turn left on Union at bottom of ramp, proceed about a mile to
South 35th Street, the multi-story Power, Light, and Water building
is on the right-hand corner across the street. There are various
marked public parking areas, follow signs at front entrance to
Auditorium.
Or, call: (253) 502 – 8205 for assistance.

8:30 Shuttle bus at Tacoma Sheraton will transport visiting conferees to
the **Location**.

9-10:30 **CLICK! Network** project tour – Tacoma Power
– example of local government-owned power utility installing
competitive fiber facilities to deliver advanced services.

Steve Klein – Superintendent of Tacoma Power – investing in
bandwidth by a power utility, open access issues.

10:30-10:45 Break

10:45-11 Opening Remarks
The Honorable Susan Ness – Commissioner, Federal
Communications Commission
The Honorable Nan Thompson – Chair, Regulatory Commission
of Alaska
The Honorable Marilyn Showalter – Chairwoman, Washington
Utilities and Transportation Commission

11- 12:15 **Forks Project** – small logging town on the Olympic Peninsula that
has facilitated alliance between LEC, local utility district, hospital,
and school district to get community wired.

Don Dennis – Government Affairs Manager, Century Telephone –
introductions, overview

John Jones – Superintendent of Quilayute Valley School District –
K – 20, consortia, E-Rate perspectives on distance learning, and
joint efforts with Alaskan entities.

Roger Harrison – Forks Community Hospital, Director of Information Services – Telemedicine perspective.

Rod Fleck – Forks City Attorney/Planner – discuss highlights of facilitated partnership/strategy.

12:15 – 1:15 Lunch – there will be a buffet at the **Location**, with a presentation by Teledesic which will highlight satellite based solutions.

1:15 – 2:30 **Satsop** – rural economic development success story.

David Danner – Governor Locke's Executive Policy Advisor on Energy and Telecommunications – Making telecommunications work for rural Washington.

Bo Wandell – President, SafeHarbor.com – providing companies with innovative web-based Internet support services.

Tami Garrow -Director of Business Development, Grays Harbor Public Development Authority - creating a business and technology park on the site of an unfinished nuclear plant, and the key role that connectivity and bandwidth plays. See <http://www.satsop.com>

2:30- 2:45 Break

2:45-4:15 **The View From Eastern Washington** – incentives and strategies for investing in advanced services infrastructure.

Robert C. Lahmann - Transmission Business Line Account Executive, Bonneville Power Administration – using fiber optics for public utility, community purposes in the Northwest

John Andrist – CEO, North Cascades Broadcasting, Inc., CEO NCI Data.Com, Inc. – bringing high speed Internet services to rural Washington using wireless applications, and becoming a CLEC.

Greg Marney – Senior Executive, NoahNet.Net - small computer consulting firm provides Web Site Hosting, Network Design & Analysis, Project Management, and Network Support.

4:15 – 4:45 Public Comment.

April 14, 2000

**BIOS
AND STATEMENTS
Tacoma, Washington**

Steven J. Klein – Tacoma Power, Superintendent

Steven J. Klein, Tacoma Power Superintendent, assumed his position in June 1993. He attended Western Washington University and the University of Washington, graduating in 1977 with a B.S. in Electrical Engineering. He was hired by Tacoma Public Utilities in 1978 and has worked in both the Engineering and Power Management Sections of the Utilities Power Division. From 1988 to 1993 Mr. Klein was the Power Manager. He is active with several regional industry groups having served as a past Chairman of the Public Generating Pool. Steve is the immediate past Chairman of the Executive Committee of the Public Power Council and serves on the Board of Directors of the Northwest Public Power Association and the Pacific Northwest Utilities Conference Committee.

Click! Network

Click! Network is provided by Tacoma Power. Tacoma Power was created by citizens more than 100 years ago to meet community needs for electricity. They believed that public ownership and local control result in higher quality services. Click! Network evolved through similar foresight. Tacoma Power originally planned to build a fiber-optic network to control its substations. Further review indicated that expanding the network and offering a wide range of telecommunications services would benefit our customers and our community. Click! Network offers the greater Tacoma, Washington, area more choices for cable TV, Internet and broadband services. It creates new options for existing Tacoma area businesses and attracts new businesses to our community. We think the possibilities for the network are just beginning to emerge.

Federal/State 706 Joint Conference Field Hearing Two

Broadband Telecommunications

By Steven J. Klein

April 14, 2000

The genesis for a robust open-access broadband telecommunications system in Tacoma was the Energy Policy Act of 1992 (EPAct92)

Faced with industry restructuring and competition Tacoma Power sought to:

- Increase efficiency
- Enhance electric system reliability and outage response
- Enhance power quality
- Offer new and innovative products & services
- Provide technical & service proficiency necessary to meet restructured industry requirements (real-time pricing, transaction accounting, etc.)
- Retain or grow market share

The Winning Strategy

- Build a broadband communications system throughout the service area
- Seek telecommunication partners

The Partner Search

- Incumbent local phone system
 - Old infrastructure with deteriorating service
 - Unwilling to invest in upgrade and provide open-access
- Incumbent cable TV system
 - Old, noisy cable plant with limited capacity
 - Strategy to play real estate monopoly – not upgrade (profit through selling the system not the service)

The Partner Search (cont.)

- **Competitive Access Provider's (CAP)**
 - Interested in “cherry picking” a limited number of high volume, Fortune 500 type business customers
- **Wireless Broadband (DBS)**
 - Oriented towards entertainment broadcast and are impractical from an economic and technical perspective for high speed data transport.

Partnership Search Conclusion

Tacoma Power could not find a viable partner and concluded we would have to build a two-way broadband telecommunications system ourselves to reach every customer in our service area.

Third Party Review of Our Concept

- December 1995, SRI hired to:
 - Evaluate the strategy and associated benefits, costs and risks
- Spring 1996, SRI issued report that:
 - recommended building HFC system
 - Adding incremental capacity for other service